

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/014867

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-44
Inventive step (IS)	Yes: Claims	
	No: Claims	1-44
Industrial applicability (IA)	Yes: Claims	1-44
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 597 168 B1 (LEE HYO-MOON) 22 July 2003 (2003-07-22) figure 3 column 4, line 16 - column 4, line 61 -----	1,2,24, 44
X	US 2002/100649 A1 (AGROTIS DEMETRIS A ET AL) 1 August 2002 (2002-08-01) abstract -----	1,2,44
A	US 6 581 480 B1 (MAY LUTZ AXEL ET AL) 24 June 2003 (2003-06-24) column 17, line 20 - column 18, line 39 -----	1-44

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/014867

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0242713	A	30-05-2002	AU 3573902 A WO 0242713 A2 EP 1409962 A2	03-06-2002 30-05-2002 21-04-2004
US 6253460	B1	03-07-2001	NONE	
EP 1076225	A	14-02-2001	JP 3597733 B2 JP 2001050703 A EP 1076225 A2 US 6496003 B1	08-12-2004 23-02-2001 14-02-2001 17-12-2002
US 6597168	B1	22-07-2003	WO 03027606 A1 EP 1425549 A1	03-04-2003 09-06-2004
US 2002100649	A1	01-08-2002	NONE	
US 6581480	B1	24-06-2003	AU 2739999 A EP 1070237 A1 WO 9956099 A1 JP 2002513147 T	16-11-1999 24-01-2001 04-11-1999 08-05-2002

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combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the features being merely obvious possibilities in view of the teachings of D1 - D6 or being obvious possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problems posed.

**Re Item VII**

**Certain defects in the international application**

1. To meet the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 - D6 should be mentioned in the description, and these documents identified therein.
2. The features of the claims should be provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
3. Page 28, line 23 - page 78, line 2 and figures 1-67 seem not to relate to the claimed position sensor, and should therefore be deleted.

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: WO 02/42713 A (FAST TECHNOLOGY AG; MAY, LUTZ, AXEL) 30 May 2002 (2002-05-30)  
D2: US-B1-6 253 460 (SCHMITZ GEOFFREY W) 3 July 2001 (2001-07-03)  
D3: EP-A-1 076 225 (ALPS ELECTRIC CO., LTD) 14 February 2001 (2001-02-14)  
D4: US-B1-6 597 168 (LEE HYU-MOON) 22 July 2003 (2003-07-22)  
D5: US 2002/100649 A1 (AGROTIS DEMETRIS A ET AL) 1 August 2002 (2002-08-01)  
D6: US-B1-6 581 480 (MAY LUTZ AXEL ET AL) 24 June 2003 (2003-06-24)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claims 1 and 44 and of dependent claims 2, 4, 15-17, 24, 25, 28 and 33-37 is not new in the sense of Article 33(2) PCT, because of the following:

All documents D1 - D5 (see passages cited in the International Search Report) disclose position sensors for detecting an angular position or a linear position of a reciprocating object or of an object that can reciprocate, comprising at least one magnetically encoded region on the object, at least one magnetic field detector and a position determining unit for determining the position of the object, with D1-D6 comprising further features of dependent claims as respectively indicated in the International Search Report.

3. The other dependent claims, relating to the magnetizing via pulses (claims 7-13), the magnetically encoded regions (claims 3, 5,6), the distribution of the plurality of magnetically encoded regions or detectors (claims 18-23,26,27, 29-32), the use of the position signal in a kind of servo-control (claim 39) or its application in a concrete processing apparatus (claims 40-43), seem not to contain any features which, in